

South Hills School of Business & Technology

Course Title:	Architectural CAD
Course Number:	IM 230 / Architectural CAD IM230 / SCE1
Credit/Hours:	3.5 credits/72 clock hours
Course Length:	12 weeks
Instructor:	Heather Fink
	paspik26@yahoo.com Phone: 814-441-5089
Instructional Materials:	<u>Building Construction Illustrated</u> , 4 th Edition, Francis D.K. Ching, 2008, John Wiley & Sons, Inc.
Course Description:	An introduction to the concepts, practices, standards, and drafting techniques used in residential/light commercial architectural drafting and design. This will include but not be limited to floor plans, elevations, foundation and framing plans, and section. Additionally framing methods, wall sections, general construction specifications, mechanical, plumbing, and electrical are covered.
Prerequisites:	Mechanical CAD, Building Codes
Course Objectives:	<p>Upon completion of this course, the student will be able to utilize AutoCAD commands to create, modify, annotate and print an architectural drawing set consisting of:</p> <ul style="list-style-type: none"> ❖ Floor Plan(s) ❖ Dimension Plan(s) ❖ Exterior Elevations ❖ Building Sections ❖ Foundation, Framing, and Roof Plans ❖ Create and insert blocks to enhance drawing creation and increase efficiency ❖ Draw and identify common components used in typical construction. ❖ A basic understanding of Door, Window, and Finish Schedules. <p>A review of Mechanical, Plumbing, Sprinkler, and Electrical Plans</p>
Course Outline:	Refer to Detailed Course Outline
Teaching Strategies:	During class time, there will be a lecture and discussion on the topic that is to be covered for that week. Most class time will include laboratory & homework time for Students to apply the principles in AutoCAD on the current topic. Students will be provided with topics as they pertain to real-world situations. Homework may be assigned and quizzes will be given.

Education Delivery Method:	Residential												
Requirements:	Students are expected to attend all classes and be knowledgeable of assigned textbook readings or provided handouts. Each class is a continuation of the previous class. Participation is expected of all Students. Homework will be assigned. Several quizzes will be given during the course.												
Evaluation:	<p>The final grade will be calculated in the following manner:</p> <ul style="list-style-type: none"> ❖ 40% - Final Plans ❖ 20% - Quizzes ❖ 20% - Homework ❖ 20% - Participation and Professionalism <p>The South Hills School of Business & Technology grading scale will be used:</p> <table border="0"> <tbody> <tr> <td>A = 95-100 (4.0)</td><td>C+ = 83-84 (2.4)</td></tr> <tr> <td>A- = 93-94 (3.7)</td><td>C = 78-82 (2.0)</td></tr> <tr> <td>B+ = 91-92 (3.4)</td><td>C- = 76-77 (1.7)</td></tr> <tr> <td>B = 87-90 (3.0)</td><td>D+ = 74-75 (1.4)</td></tr> <tr> <td>B- = 85-86 (2.7)</td><td>D = 70-73 (1.0)</td></tr> <tr> <td></td><td>F = Below 70 (0.0)</td></tr> </tbody> </table> <p>Minimum grade required as a major class = 76% Minimum grade required as a non-major class = 70%</p>	A = 95-100 (4.0)	C+ = 83-84 (2.4)	A- = 93-94 (3.7)	C = 78-82 (2.0)	B+ = 91-92 (3.4)	C- = 76-77 (1.7)	B = 87-90 (3.0)	D+ = 74-75 (1.4)	B- = 85-86 (2.7)	D = 70-73 (1.0)		F = Below 70 (0.0)
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Outside Preparation:	<p>To adequately comprehend content and achieve success in South Hills courses, time outside of class spent reading, studying, reviewing, practicing, researching, and completing assignments is required. The number of credit hours assigned to a traditionally delivered course is defined for purposes of financial aid and is based on the following definition.</p> <p>In compliance with federal regulations, South Hills defines one (quarter system*) credit as either:</p> <ul style="list-style-type: none"> • A minimum of 14 direct faculty instruction periods (lecture) with not less than two hours of out-of-class work per hour of lecture • Or 28 laboratory hours • Or 42 internship hours • Or an appropriate combination of all three per 10 – 12 week session <p>* South Hills is a quarter system school, as opposed to a semester system school.</p>												

<p>Class Policies:</p>	<p><u>Attendance</u></p> <p>Attendance will be per School requirements and shall also count towards your Participation and Professionalism Grade.</p> <p><u>Others:</u></p> <ol style="list-style-type: none"> 1. Make-up Work: Make-up quizzes are not allowed unless arranged in advance, or per instructor's allowance due to extenuating circumstances that are explained at the time of the occurrence. Homework may be turned in (1) day late for a maximum of 2 points. 2. Being on time to class is expected. However, if you are more than 5 minutes late for class or site visits you will be considered Tardy. Each Tardy will be equal to -5 points. 3. If you reach a total of -50 points, or higher, this will reflect 0 points obtained for Participation and Professionalism. The maximum grade you will be able to obtain will be an 80%. 4. No extra credit will be given. 5. If a "Lowest Grade" dropped option is offered, a "0" that has been obtained from the Honesty Policy requirements will not be permitted to be dropped. The next lowest grade would be selected. 6. Materials Needed: Storage disk (flash memory), Calculator, Note Pad, Class assigned book, all handouts. 7. Expectations: <ol style="list-style-type: none"> a) If you miss a class, it is your responsibility to get the notes and assignments that you missed. b) No cell phones will be allowed to be used in class; this also applies to text messaging. Each occurrence that is observed will reflect in -5 points per occurrence. c) No emailing or surfing the internet is allowed, except if it is course related. No game playing or social networking sites will be allowed. Each occurrence that is observed will reflect in -5 points per occurrence. d) No listing to music through the computer or on personal headsets will be allowed. e) School policy, as it pertains to eating and drinking in the laboratory, will be strictly followed. f) If Field Trip(s) are arranged it is the Students responsibility to make arrangements to get to the location(s). Additionally, lateness will not be tolerated. Attendance is required just as it would be for the classroom. 8. Homework will be graded on the following policy: <ol style="list-style-type: none"> a) 0 points if homework is incomplete b) 3 point maximum if homework is complete but perfunctory c) 6 points maximum if homework is complete and comprehensive 9. Participation is graded based on attendance and class behavior. 10. Course Project guidelines will be further detailed in the later weeks; grading is based on completion and accuracy.
<p>Bibliography:</p>	<p>None</p>

Revision Date:	8/20/13

Course Name: Architectural CAD

Total Hours: 72 Lecture Hours: 28 Lab Hours: 44 Homework Hours: 56

Detailed Course Outline

Week Hours	Session Topic	Resources	Assignments	Number of HW Hours
Week 1 Hours:	Review course objectives, General Drafting Information, Project Information	Text: Building Construction Illustrated	Vocabulary & Reading Assignments	4
Week 2 Hours:	Site & Building Code Information	Text: Building Construction Illustrated	Vocabulary & Reading Assignments	4
Week 3 Hours:	Building Material Information, First Floor Plan, Office Layout	Text: Building Construction Illustrated	First Floor Plan, Vocabulary & Reading Assignments	5.5
Week 4 Hours:	Door & Window Requirements	Text: Building Construction Illustrated	First Floor Plan, Vocabulary & Reading Assignments	5.5
Week 5 Hours:	Kitchen & Restroom Requirements	Text: Building Construction Illustrated	First Floor Plan, Vocabulary & Reading Assignments	5.5
Week 6 Hours:	Stair & Apartment Information	Text: Building Construction Illustrated	Second Floor Plan, Vocabulary & Reading Assignments	5.5
Week 7 Hours:	Exterior Building Material Information, Elevations	Text: Building Construction Illustrated	Elevations, Vocabulary & Reading Assignments	5.5
Week 8 Hours:	Foundation, Framing & Roof Plan	Text: Building Construction Illustrated	Foundation, Framing, & Roof Plans, Vocabulary & Reading Assignments	5.5
Week 9 Hours:	Building Section	Text: Building Construction Illustrated	Section, Vocabulary & Reading Assignments	5.5

Week 10 Hours:	Room/Door/Window Tags, Sheet Layouts, Annotation, Dimensioning	Text: Building Construction Illustrated	Tags, Sheet Layout, Annotation, Dimensioning	3
Week 11 Hours:	Dimensioning & Annotation	Text: Building Construction Illustrated	Dimensioning, Annotation, Reading Assignments	3
Week 12 Hours:	Discussion on Door/Window/Finish Schedules, Cover Sheet, Construction Notes, Interior Elevations, Construction Details, ADA Signage, HVAC, Plumbing, Sprinkler, & Electrical Plans, Finalize Construction Plans	Text: Building Construction Illustrated	Create a complete set of Construction Plans	5